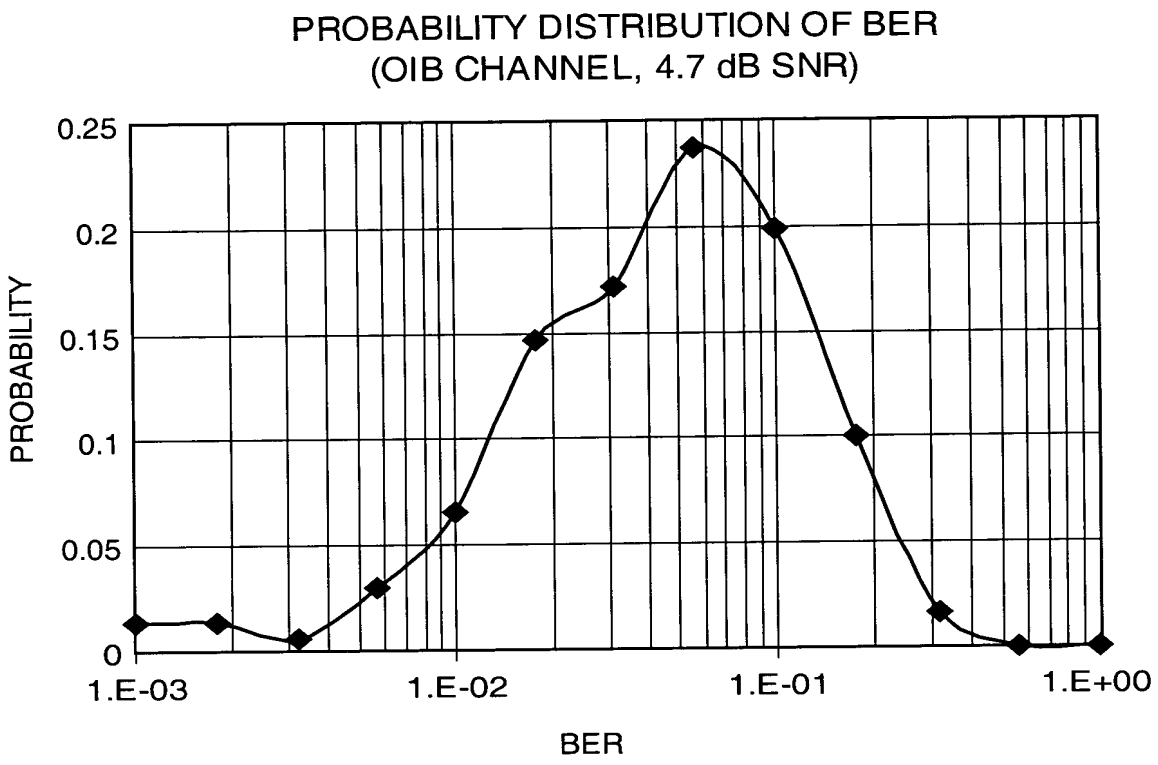
PROBABILITY DISTRIBUTION OF BER
(OIB CHANNEL, 4.7 dB SNR)
PROBABILITY
0.25
0.2
0.15
0.1
0.05
0
1.E-03
1.E-02
1.E-01
1.E+00
BER

FIG. 1

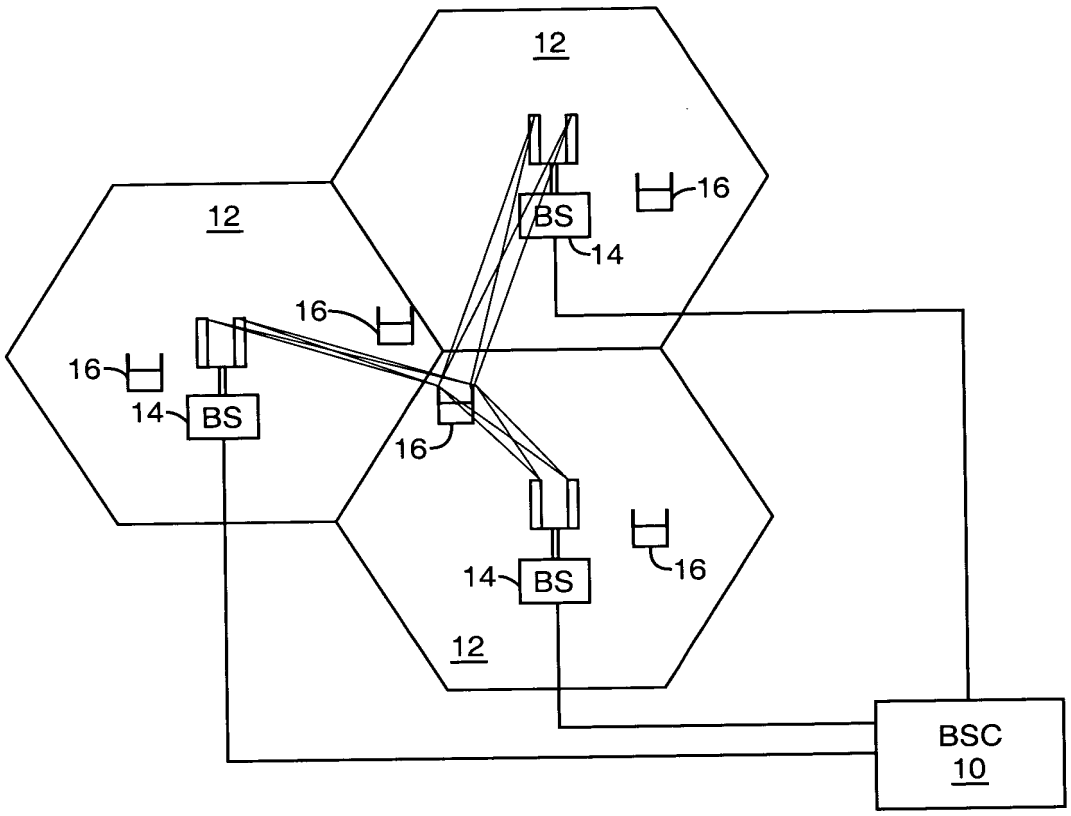

FIG. 2

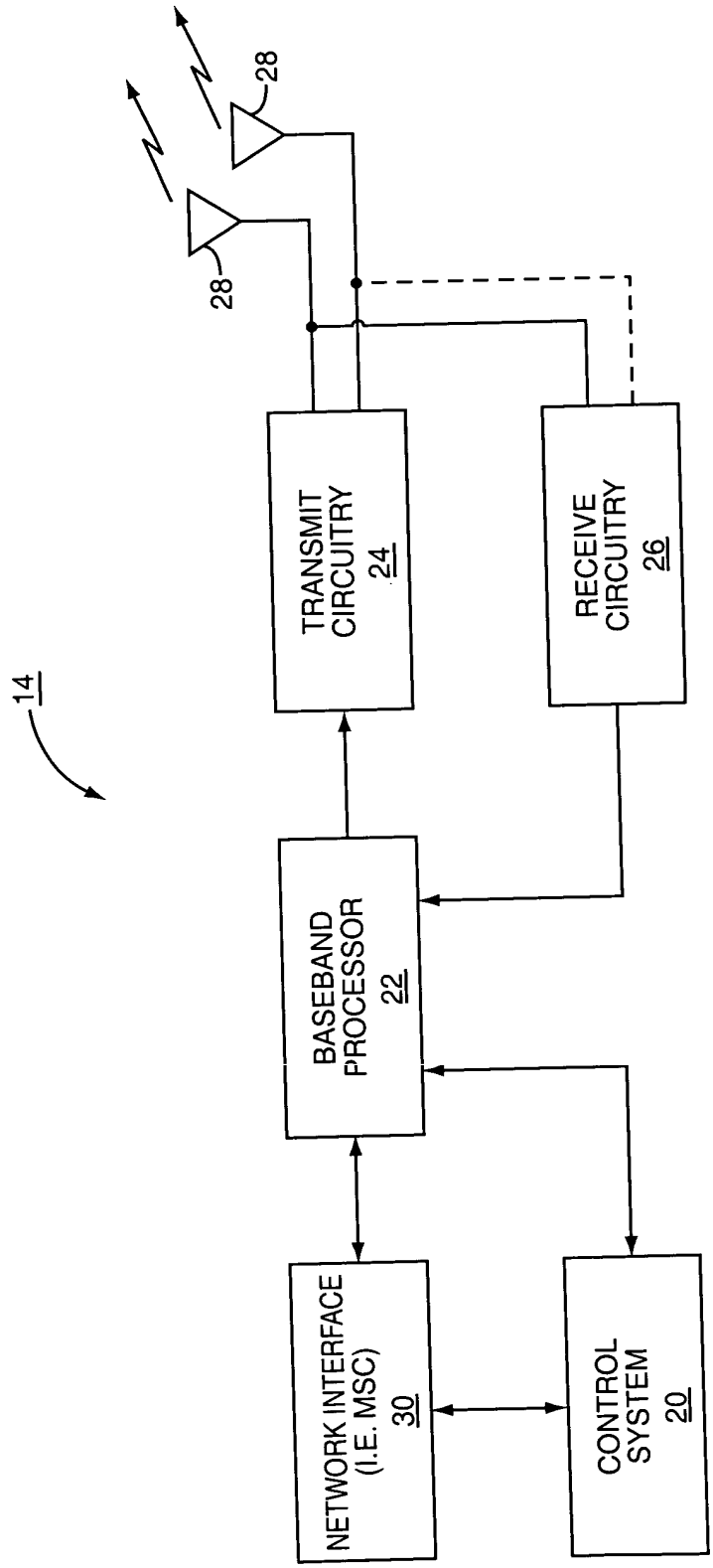
14
28
28
TRANSMIT CIRCUITRY 24
RECEIVE CIRCUITRY 26
BASEBAND PROCESSOR 22
NETWORK INTERFACE (I.E. MSC) 30
CONTROL SYSTEM 20

FIG. 3

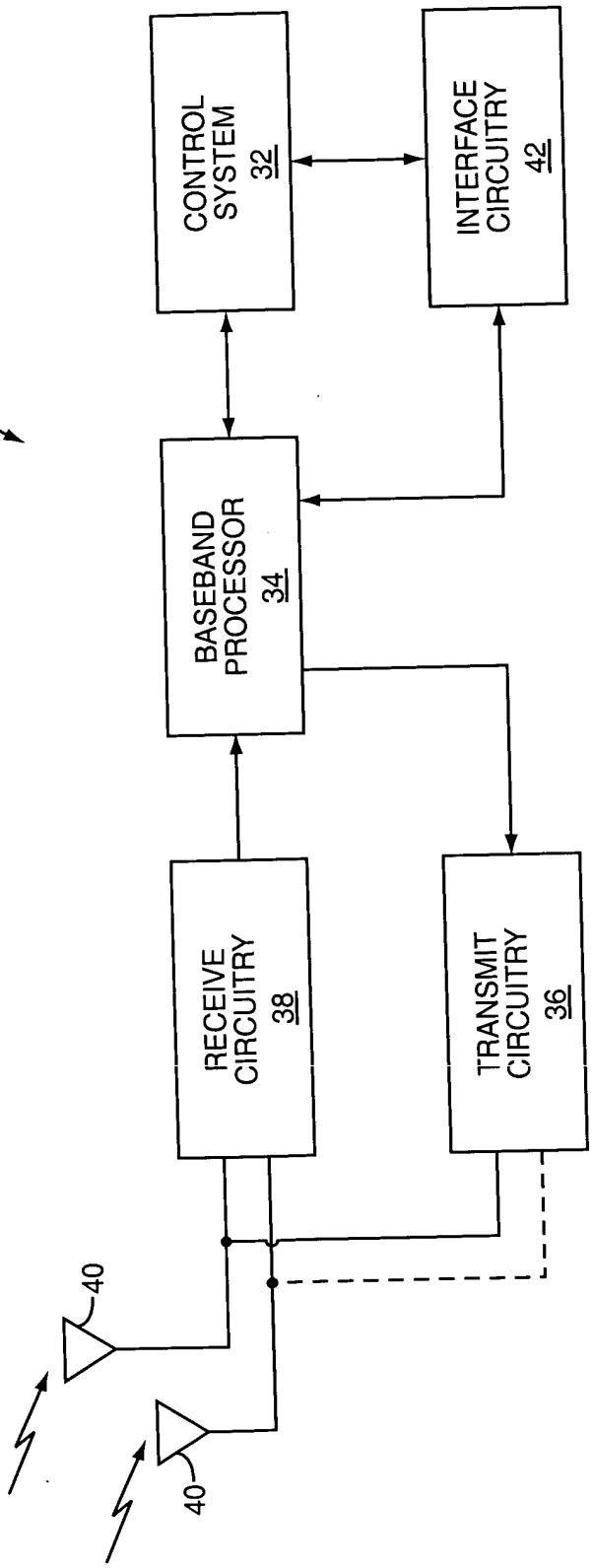
16
CONTROL SYSTEM 32
INTERFACE CIRCUITRY 42
BASEBAND PROCESSOR 34
RECEIVE CIRCUITRY 38
TRANSMIT CIRCUITRY 36
40
40

FIG. 4

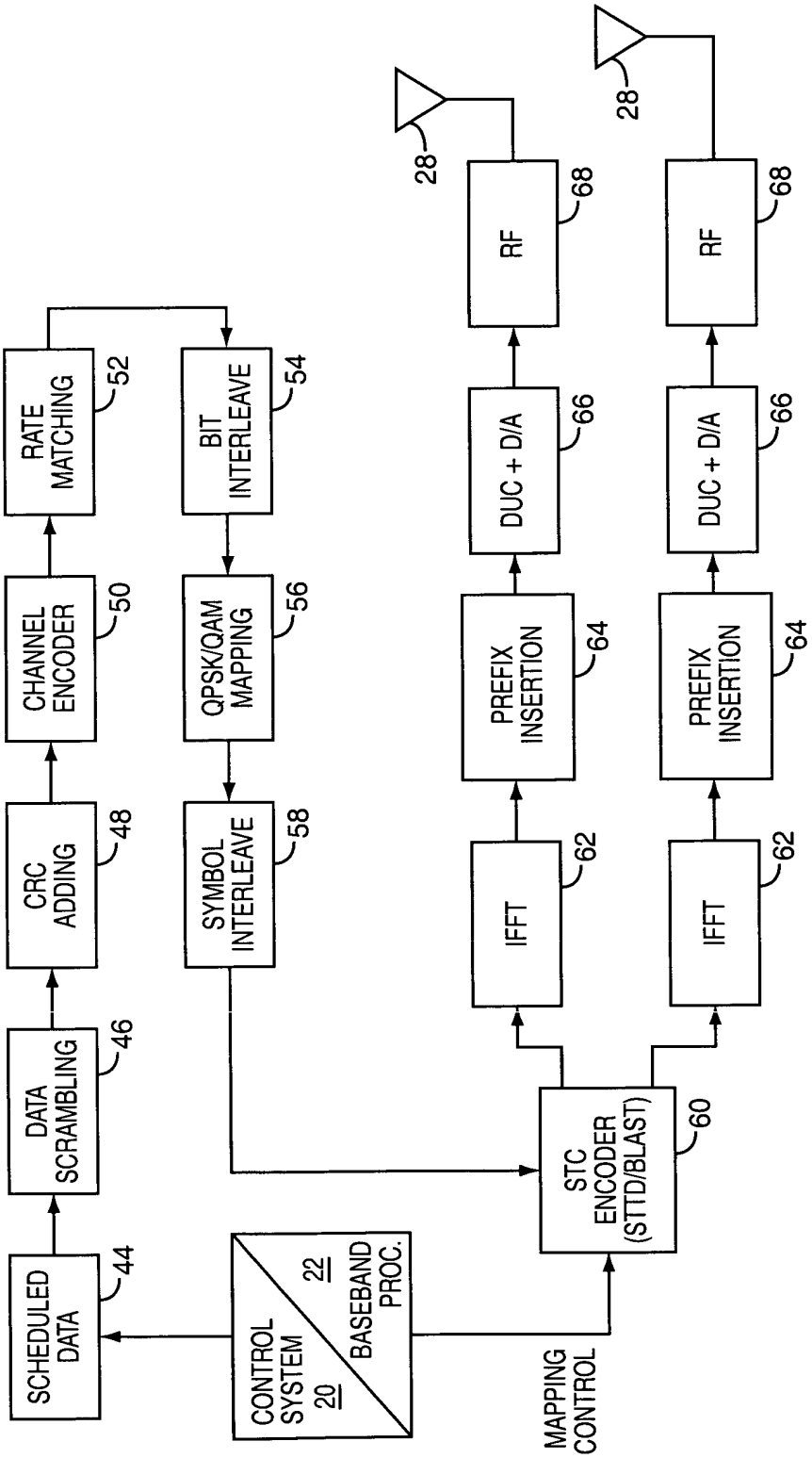
SCHEDULED DATA
44
DATA SCRAMBLING
46
CRC ADDING
48
CHANNEL ENCODER
50
RATE MATCHING
52
BIT INTERLEAVE
54
QPSK/QAM MAPPING
56
SYMBOL INTERLEAVE
58
CONTROL SYSTEM 20
22 BASEBAND PROC.
MAPPING CONTROL
STC ENCODER (STTD/BLAST)
60
IFFT
62
PREFIX INSERTION
64
DUC + D/A
66
RF
68
28
28

FIG. 5

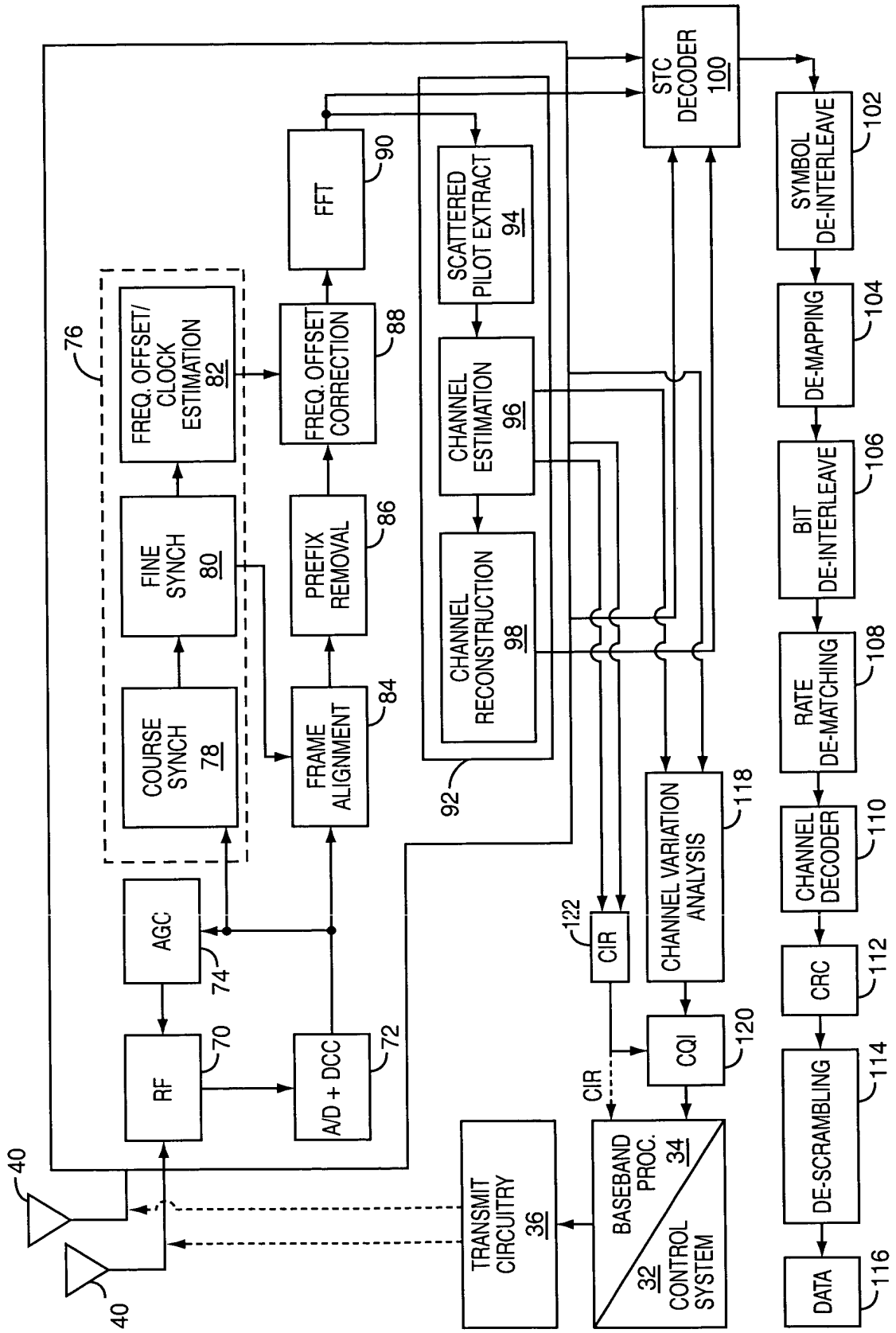
40
40
TRANSMIT CIRCUITRY 36
BASEBAND PROC. 34
32 CONTROL SYSTEM
RF 70
A/D + DCC 72
AGC 74
76
COURSE SYNCH 78
FINE SYNCH 80
FREQ. OFFSET/ CLOCK ESTIMATION 82
FRAME ALIGNMENT 84
PREFIX REMOVAL 86
FREQ. OFFSET CORRECTION 88
FFT 90
92
CHANNEL RECONSTRUCTION 98
CHANNEL ESTIMATION 96
SCATTERED PILOT EXTRACT 94
STC DECODER 100
CIR 122
CIR
CQI 120
CHANNEL VARIATION ANALYSIS 118
SYMBOL DE-INTERLEAVE 102
DE-MAPPING 104
BIT DE-INTERLEAVE 106
RATE DE-MATCHING 108
CHANNEL DECODER 110
CRC 112
DE-SCRAMBLING 114
DATA 116

FIG. 6

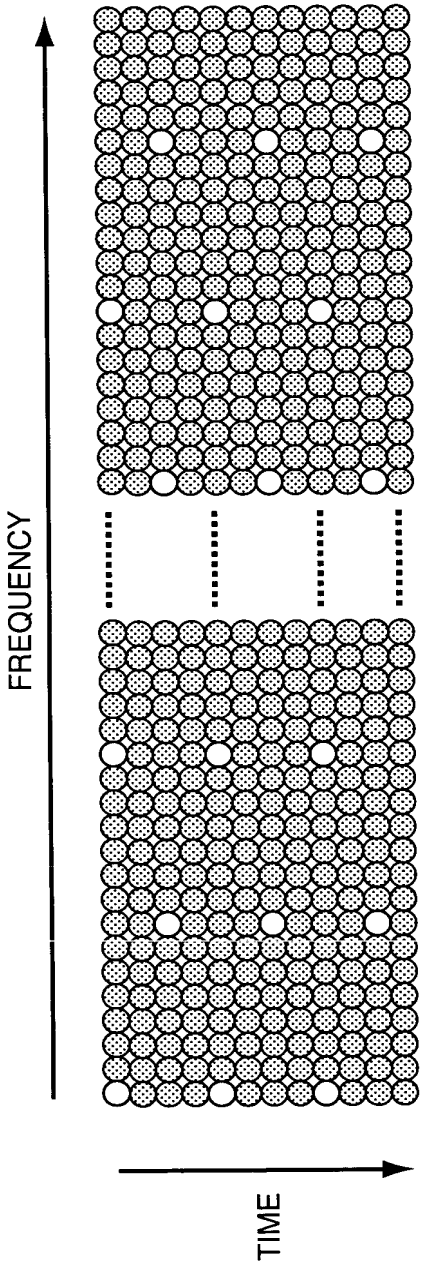

FIG. 7

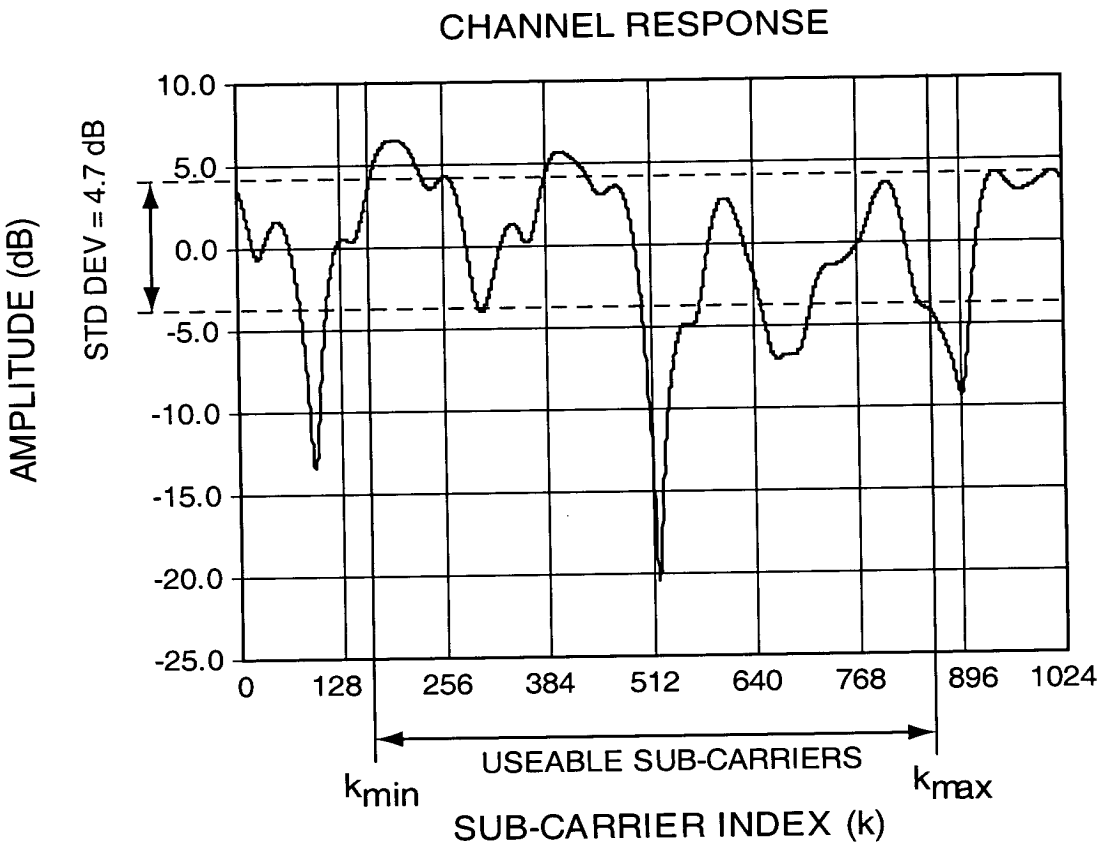
CHANNEL RESPONSE
AMPLITUDE (dB)
STD DEV = 4.7 dB
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
0
128
256
384
512
640
768
896
1024
USEABLE SUB-CARRIERS
kmin
kmax
SUB-CARRIER INDEX (k)

FIG. 8